

## Flood stages during April, 1923—Continued.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
EAST GULF DRAINAGE—continued.					
Chickasawhay:		Feet.		Feet.	
Enterprise, Miss.....	21	6	7	24.6	6
Shubuta, Miss.....	27	7	10	28.9	2
Leaf:					
Hattiesburg, Miss.....	19	6	7	20.0	6
Pearl:					
Jackson, Miss.....	20	(*)	28	30.5	6
Columbia, Miss.....	18	(*)	26	26.5	6
West Pearl:					
Pearl River, La.....	13	(*)	(1)	16.9	9
GREAT LAKES DRAINAGE.					
Pine:					
Alma, Mich.....	6	6	6	6.2	6
Do.....	6	8	8	6.1	8
MISSISSIPPI DRAINAGE.					
Mississippi:					
New Madrid, Mo.....	34	(*)	2	34.6	1
Memphis, Tenn.....	35	(*)	4	35.8	1
Helena, Ark.....	44	(*)	7	45.4	1
Arkansas City, Ark.....	48	(*)	10	49.4	4-7
Greenville, Miss.....	42	6	7	42.0	6-7
Vicksburg, Miss.....	45	(*)	19	48.0	9-10
Natchez, Miss.....	46	3	21	48.7	14
Baton Rouge, La.....	35	4	29	38.8	15
Donaldsonville, La.....	28	5	27	30.6	16
New Orleans, La.....	17	8	23	18.1	14-16
Wisconsin:					
Merrill, Wis.....	11	21	23	11.9	21
Knowlton, Wis.....	12	20	24	16.0	22
Spirit:					
Tomahawk, Wis.....	14	21	22	14.7	22
Illinois:					
Peru, Ill.....	14	(*)	2	14.1	1
Henry, Ill.....	7	(*)	20	9.0	1-2
Peoria, Ill.....	16	(*)	1	16.5	1
Havana, Ill.....	14	(*)	1	14.1	1
Beardstown, Ill.....	12	(*)	17	14.6	1
St. Francis:					
Marked Tree, Ark.....	17	(*)	15	18.7	1-3
North Canadian:					
Woodward, Okla.....	3	29	29	3.6	29
Petit Jean:					
Danville, Ark.....	20	29	(1)	22.3	30
Black:					
Black Rock, Ark.....	14	(*)	2	16.0	1
Do.....	14	5	8	16.1	5
Yazoo:					
Yazoo City, Miss.....	25	(*)	(1)	30.3	25
Tallahatchie:					
Swan Lake, Miss.....	25	(*)	(1)	28.8	8-10, 13-15
Atchafalaya:					
Simmesport, La.....	41	7	7	41.0	7
Do.....	41	9	26	43.3	16-17
Melville, La.....	37	4	(1)	39.9	16-17
WEST GULF DRAINAGE.					
Sabine:					
Logansport, La.....	25	6	14	27.1	8
Bon Wier, Tex.....	20	(*)	26	22.3	5, 15
Orange, Tex.....	4	4	(1)	5.8	16-17
Neches:					
Rockland, Tex.....	22	13	20	27.6	15
Beaumont, Tex.....	7	(*)	5	7.9	2-3
Do.....	7	8	10	7.9	8
Do.....	7	12	29	11.2	16
Trinity:					
Bridgeport, Tex.....	25	26	27	25.7	26
Dallas, Tex.....	25	26	(1)	32.2	26
Trinidad, Tex.....	28	28	(1)	32.1	30
Liberty, Tex.....	25	(*)	6	26.8	3-4
Do.....	25	14	23	27.6	20
Brazos:					
Freeport, Tex.....	4	17	17	5.8	17
Guadalupe:					
Victoria, Tex.....	16	16	16	17.0	16

\* Continued into May.

\* Continued from March.

## MEAN LAKE LEVELS DURING APRIL, 1923.

By UNITED STATES LAKE SURVEY.

[Detroit, Mich., May 7, 1923.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes. <sup>1</sup>			
	Superior.	Michigan and Huron.	Erie.	Ontario.
Mean level during April, 1923:				
Above mean sea level at New York.....	Feet. 601.39	Feet. 579.18	Feet. 571.31	Feet. 245.33
Above or below—				
Mean stage of March, 1923.....	-0.06	+0.20	+0.33	+0.59
Mean stage of April, 1923.....	-0.05	-0.78	-1.01	-0.73
Average stage for April, last 10 years.....	-0.43	-1.25	-1.17	-1.06
Highest recorded April stage.....	-1.30	-4.05	-2.87	-3.10
Lowest recorded April stage.....	+0.85	-0.04	+0.05	+0.49
Average relation of the April level to—				
March, level.....		+0.40	+0.70	+0.70
May, level.....		-0.30	-0.40	-0.30

<sup>1</sup> Lake St. Clair's level: In April, 574.14 feet.

## EFFECT OF WEATHER UPON CROPS AND FARMING OPERATIONS, APRIL, 1923.

By J. B. KINCER, Meteorologist.

The temperature for the month of April averaged near the normal in practically all sections of the country, but warmth in different portions of the month varied greatly and on the whole temperature conditions were unfavorable for agricultural interests. Unusually low temperatures for the season prevailed during the first of the month when subzero readings were reported from points in the northern Lake region and freezing extended to the central portions of the east Gulf States. Precipitation was frequent and heavy in the South, except in the south Atlantic districts, and was much above normal in California. Somewhat less than the normal amount was received from the Ohio and central Mississippi Valleys northward. Sunshine was scanty in most sections east of the Rocky Mountains, especially in the upper Mississippi Valley and the west Gulf area.

The cool, cloudy weather during the first half of the month in the central and northern States east of the Rocky Mountains retarded vegetative development considerably, while frequent rains in the South delayed field work in that section and the unseasonable cold caused delay in farm operations to the northward.

The latter half of the month was much more favorable for agricultural interests in the interior and northern States, as warmer weather and more sunshine prevailed. Winter wheat showed some improvement in the Ohio Valley States, but the crop was backward and growth slow, because of the cool spring, and moisture was needed at the close of the month in much of this area as well as in the Lake region. Generous rains in Nebraska during the week ending April 24 greatly benefited fall-seeded grains, while the long drought in western Kansas was effectually broken during the following week. Much better weather for field work prevailed in the spring-wheat States during the latter part of the month, although it continued too wet in a few localities. Conditions were more favorable also for seeding oats and this work was completed or well advanced at the close of the month in the later, northern districts.

The preparation of soil for corn and planting made slow progress until the last two weeks of the month when better advance was possible. Much corn ground was prepared and some planting was done in the principal producing areas. The month was generally unfavorable in the Cotton Belt owing to frequent rains and wet soil. On the whole cotton made fair progress in Texas and planting